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The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. An isolated cDNA molecule that encodes a CAN-1 polypeptide that is at least 70% identical to a CAN-1 polypeptide consisting of an amino acid sequence selected from the amino acid sequence of SEQ ID NO:2 and the amino acid sequence of SEQ ID NO:3.

2. A cDNA molecule of Claim 1, wherein the encoded polypeptide is at least 70% identical to the CAN-1 polypeptide of SEQ ID NO:2.

3. A cDNA molecule of Claim 1, wherein the encoded polypeptide is at least 80% identical to the CAN-1 polypeptide of SEQ ID NO:2.

4. A cDNA molecule of Claim 1, wherein the encoded polypeptide is at least 90% identical to the CAN-1 polypeptide of SEQ ID NO:2.

5. A cDNA molecule of Claim 1, wherein the encoded polypeptide is at least 70% identical to the CAN-1 polypeptide of SEQ ID NO:3.

6. A cDNA molecule of Claim 1, wherein the encoded polypeptide is at least 80% identical to the CAN-1 polypeptide of SEQ ID NO:3.

7. A cDNA molecule of Claim 1, wherein the encoded polypeptide is at least 90% identical to the CAN-1 polypeptide of SEQ ID NO:3.

8. An isolated cDNA molecule that encodes a CAN-1 polypeptide, said cDNA molecule hybridizing under conditions of 2 X SSC at 55°C for 30 minutes to the complement of the cDNA molecule consisting of the nucleic acid sequence set forth in SEQ ID NO:1.

9. An isolated cDNA molecule of Claim 8 that hybridizes under conditions of 1 X SSC at 55°C for 30 minutes to the complement of the cDNA molecule consisting of the nucleic acid sequence set forth in SEQ ID NO:1.

10. An isolated cDNA molecule of Claim 8 that hybridizes under conditions of 0.2 X SSC at 55°C for 30 minutes to the complement of the cDNA molecule consisting of the nucleic acid sequence set forth in SEQ ID NO:1.

11. An isolated cDNA molecule of Claim 8 that consists of the nucleic acid sequence set forth in SEQ ID NO:1.

12. An isolated cDNA molecule that is at least 70% identical to the portion of the CAN-1 cDNA molecule of SEQ ID NO:1 extending from nucleotide number 1 through nucleotide number 551.

13. An isolated genomic DNA molecule that: (a) encodes a CAN-1 polypeptide; (b) is less than 38 kilobases long; and (c) hybridizes to the complement of the nucleic acid molecule of SEQ ID NO:1 under conditions of 2 X SSC at 55°C for 30 minutes.

14. An isolated genomic DNA molecule of Claim 13 that hybridizes to the complement of the nucleic acid molecule of SEQ ID NO:1 under conditions of 1 X SSC at 55°C for 30 minutes.

15. An isolated genomic DNA molecule of Claim 13 that hybridizes to the complement of the nucleic acid molecule of SEQ ID NO:1 under conditions of 0.2 X SSC at 55°C for 30 minutes.

16. An isolated cDNA molecule that encodes a CAN-1 polypeptide, wherein:  
(a) the encoded CAN-1 polypeptide is the same length as the CAN-1 polypeptide consisting of the amino acid sequence of SEQ ID NO:2;

(b) the encoded CAN-1 polypeptide is at least 70% identical to the CAN-1 polypeptide consisting of the amino acid sequence set forth in SEQ ID NO:2; and

(c) the second nucleic acid residue of the codon that encodes the amino acid at position 83 of the CAN-1 polypeptide is T.

17. An isolated genomic DNA molecule that:

(a) encodes a CAN-1 polypeptide;

(b) comprises a nucleic acid sequence that is at least 70% identical to the CAN-1 genomic DNA sequence set forth in SEQ ID NO:4; and

(c) comprises at least one of the single nucleotide polymorphisms set forth in Table 1 herein.

18. An isolated genomic DNA molecule that:

(a) encodes a CAN-1 polypeptide;

(b) comprises a nucleic acid molecule that hybridizes to the complement of the CAN-1 genomic DNA sequence set forth in SEQ ID NO:4 under conditions of 2 X SSC at 55°C for 30 minutes; and

(c) comprises the nucleic acid sequence TTACAG at positions 7 through 12 of the nucleic acid molecule that hybridizes to the complement of the CAN-1 genomic DNA sequence set forth in SEQ ID NO:4 under conditions of 2 X SSC at 55°C for 30 minutes.

19. An isolated oligonucleotide of between 10 base pairs and 100 base pairs that hybridizes at 10°C below its melting temperature to the CAN-1 cDNA of SEQ ID NO:1, or to the CAN-1 genomic DNA of SEQ ID NO:4, or to the complement of the CAN-1 cDNA of SEQ ID NO:1, or to the complement of the CAN-1 genomic DNA of SEQ ID NO:4.

20. An isolated nucleic acid molecule that encodes an STG protein and that hybridizes under conditions of 2 X SSC at 55°C for 30 minutes to the complement of the cDNA molecule set forth in SEQ ID NO:5, provided that the isolated nucleic acid molecule is not a genomic DNA molecule greater than 43 kilobases long.

21. An isolated cDNA molecule of Claim 20.

22. An isolated genomic DNA molecule of Claim 20.

23. An isolated cDNA molecule that:

(a) encodes an STG polypeptide that is the same length as the STG polypeptide consisting of the amino acid sequence of SEQ ID NO:6, wherein the encoded STG polypeptide is at least 70% identical to the STG polypeptide consisting of the amino acid sequence set forth in SEQ ID NO:6; and

(b) includes a single nucleotide polymorphism selected from the group consisting of: the first nucleic acid residue of the forty eighth codon is A; the second nucleic acid residue of the eighty first codon is C; the first nucleic acid residue of the eighty third codon is C; the third nucleic acid residue of the one hundred and sixty fourth codon is T; the first nucleic acid residue of the one hundred and sixty fifth codon is A; and the third nucleic acid residue of the three hundredth codon is C.

24. An isolated genomic DNA molecule that:

(a) encodes an STG polypeptide;

(b) comprises a nucleic acid sequence that is at least 70% identical to the STG genomic DNA sequence set forth in SEQ ID NO:7; and

(c) comprises at least one of the single nucleotide polymorphisms set forth in Table 2 herein.

25. An isolated oligonucleotide, between 10 base pairs and 100 base pairs in length, that hybridizes at 10°C below its melting temperature to the STG cDNA of SEQ ID NO:5, or to the STG genomic clone of SEQ ID NO:7, or to the complement of the STG cDNA of SEQ ID NO:5, or to the complement of the STG genomic clone of SEQ ID NO:7.

26. A vector comprising a nucleic acid molecule of Claim 1, Claim 8, Claim 13 or Claim 20.

27. A host cell comprising a vector of Claim 26.

28. An isolated CAN-1 polypeptide that is at least 70% identical to the CAN-1 polypeptide of SEQ ID NO:2, or is at least 70% identical to the CAN-1 polypeptide of SEQ ID NO:3.

29. An isolated CAN-1 polypeptide of Claim 28 that is at least 70% identical to the CAN-1 polypeptide of SEQ ID NO:2.

30. An isolated CAN-1 polypeptide of Claim 28 that is at least 70% identical to the CAN-1 polypeptide of SEQ ID NO:3.

31. An isolated SEEK-1 polypeptide that is at least 70% identical to the SEEK-1 polypeptide of SEQ ID NO:9.

32. An isolated STG polypeptide that is at least 70% identical to the STG polypeptide of SEQ ID NO:6.

33. An isolated antibody that binds specifically to a polypeptide consisting of an amino acid sequence that is at least 70% identical to an amino acid sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:6, and SEQ ID NO:9.

34. An isolated antibody of Claim 33 that binds specifically to a polypeptide that is at least 70% identical to the polypeptide having the amino acid sequence set forth in SEQ ID NO:2.

35. An isolated antibody of Claim 34, wherein said antibody is a monoclonal antibody.

36. An isolated antibody of Claim 34, wherein said antibody is a polyclonal antibody.

37. An isolated antibody of Claim 34, wherein said antibody is a CDR-grafted antibody.

38. An isolated antibody of Claim 33 that binds specifically to a polypeptide that is at least 70% identical to the polypeptide having the amino acid sequence set forth in SEQ ID NO:3.

39. An isolated antibody of Claim 38, wherein said antibody is a monoclonal antibody.

40. An isolated antibody of Claim 38, wherein said antibody is a polyclonal antibody.

41. An isolated antibody of Claim 38, wherein said antibody is a CDR-grafted antibody.

42. An isolated antibody of Claim 33 that binds specifically to a polypeptide that is at least 70% identical to the polypeptide having the amino acid sequence set forth in SEQ ID NO:6.

43. An isolated antibody of Claim 42, wherein said antibody is a monoclonal antibody.

44. An isolated antibody of Claim 42, wherein said antibody is a polyclonal antibody.

45. An isolated antibody of Claim 42, wherein said antibody is a CDR-grafted antibody.

46. An isolated antibody of Claim 33 that binds specifically to a polypeptide that is at least 70% identical to the polypeptide having the amino acid sequence set forth in SEQ ID NO:9.

47. An isolated antibody of Claim 46, wherein said antibody is a monoclonal antibody.

48. An isolated antibody of Claim 46, wherein said antibody is a polyclonal antibody.

49. An isolated antibody of Claim 46, wherein said antibody is a CDR-grafted antibody.

50. A method of diagnosing or predicting the susceptibility to psoriasis in an individual, said method comprising the steps of:

- (a) obtaining a sample from an individual;
- (b) determining an expression level of at least one polypeptide chosen from the group consisting of CAN-1, STG, and SEEK-1 in said sample; and

(c) diagnosing or predicting the susceptibility of said individual to psoriasis based on the presence or amount of expression of said polypeptide.

51. A method for ameliorating the symptoms and/or progression of psoriasis, the method comprising the step of administering to an individual suffering from psoriasis an inhibitory amount of a selective inhibitor of a polypeptide chosen from the group consisting of CAN-1, STG and SEEK-1, wherein the inhibitory amount of the selective inhibitor causes a reduction in the amount and/or activity of the polypeptide.

52. A method of making an isolated CAN-1, STG or SEEK-1 polypeptide comprising:

(a) culturing a host cell comprising a vector comprising a nucleic acid molecule encoding a CAN-1, STG or SEEK-1 polypeptide under conditions that enable expression of said CAN-1, STG or SEEK-1 polypeptide; and

(b) recovering said expressed polypeptide.

53. A method for identifying a binding partner to a CAN-1, STG or SEEK-1 polypeptide comprising:

(a) contacting a CAN-1, STG or SEEK-1 polypeptide with a binding partner; and

(b) determining whether the binding partner affects an activity of the polypeptide.

54. A method of inhibiting movement of cells into the epidermis comprising contacting a CAN-1 binding partner to a CAN-1 polypeptide such that the binding partner inhibits movement of cells into the epidermis by reducing a chemotaxic property of the CAN-1 polypeptide.

55. The method of Claim 54 wherein said cells are selected from a group consisting of T-cells, endothelial cells, lymphocytes, monocytes and neutrophils.

56. A method of inhibiting hyperproliferation of keratinocytes comprising contacting a CAN-1 binding partner to a CAN-1 polypeptide such that the binding partner

inhibits the hyperproliferation of keratinocytes by reducing a hyperproliferation property of the CAN-1 polypeptide.

57. A method of inhibiting abnormal differentiation of keratinocytes comprising contacting a CAN-1 binding partner to a CAN-1 polypeptide such that the binding partner inhibits abnormal differentiation of keratinocytes by reducing an amount of unbound CAN-1.